



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,536	02/02/2005	Eduard Michel	2002DE123	7551
25255 7590 03/05/2009 CLARIANT CORPORATION INTELLECTUAL PROPERTY DEPARTMENT 4000 MONROE ROAD CHARLOTTE, NC 28205				
EXAMINER BURNEY, RACHEL L				
ART UNIT		PAPER NUMBER		
1795				
MAIL DATE		DELIVERY MODE		
03/05/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/523,536

**Applicant(s)**

MICHEL ET AL.

**Examiner**

Rachel L. Burney

**Art Unit**

1795

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,5,9-12,15-18 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,9-12,15-18 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 5, 9-12, 15, 16, 18, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5288581, Ziolo in view of US Patent 5502118, Macholdt et al.

With respect to claims 1, 5, 9, and 22, Ziolo discloses a toner comprising a charge enhancing additive, which may be a layered double hydroxide, which is made from a hydrotalcite, which are mixed metal hydroxides, comprising divalent and trivalent metal cations, and may comprise organic anions, such as terephthalate (column 1, lines 8-45). The double hydroxide may contain  $Mg^{2+}$  and  $Al^{3+}$  (column 1, lines 25-26). Ziolo does not disclose the molar ratio of  $Mg^{2+}$  to  $Al^{3+}$ , or the ratio of hydroxyl group to the sum of all the metal cations, however because Ziolo is using the same compositions for the same embodiment, it would have been obvious to one of ordinary skill in the art the use a combination which is workable in the given embodiment, and that would have reasonably fallen within the

desired ranges. Ziolo does not disclose the specific organic anions of the instant application. Macholdt discloses a process for controlling the charge of an electrophotographic toner (column 1, lines 5-7) using a charge control agent comprising a cationic and an anionic portion, which may be a dicarboxylic acid (column 5, lines 19-42). The anionic dicarboxylic acid may be a terephthalic acid or 1,4-naphthalenedicarboxylic acid (column 6, lines 14-20). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the anionic dicarboxylic acid of Macholdt as the anionic component of Ziolo and Michel because they are known variants of compositions used in charge controlling process.

With respect to claim 10, Ziolo further discloses that an ammonium salt may also be used as the charge control agent (column 1, line 66 – column 2, line 3).

With respect to claims 11, 12, 18, and 23, Ziolo further discloses that the charge enhancing additive is present in an amount of 0.1 to 5% by weight of the toner, a resin (binder) is present in an amount of 70 to about 90%, and the colorant is present in 10% by weight (column 5, lines 54-66).

With respect to claim 15, Ziolo further discloses that the divalent metal cations may be  $Mg^{2+}$ ,  $Zn^{2+}$ ,  $Co^{2+}$ ,  $Ni^{2+}$ , or  $Fe^{2+}$  (column 1, line 25).

With respect to claim 16, Ziolo further discloses that the trivalent metal cation may be  $Al^{3+}$ ,  $Fe^{3+}$ , or  $Cr^{3+}$  (column 1, line 26).

With respect to claim 17, Macholdt further discloses that the carboxylic acid may be a stearic acid (column 7, lines 26-28).

With respect to claim 24, Ziolo further discloses that the toner may be prepared by a dispersion polymerization (column 8, lines 23-34), which would require the charge enhancing agent to be in an aqueous or organic dispersion.

3. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5288581, Ziolo in view of US Patent 5502118, Machdolt et al. as applied to claim 1 above, and further in view of US Patent 5445911, Russell et al. Ziolo and Machdolt disclose the process of claim 1 as discussed above, but fail to teach the use of a monovalent metal cation. Russell discloses the use of metal cations in a positive charge director in an electrographic toner wherein the preferred metals are K<sup>+</sup> and Na<sup>+</sup> because they have no health or environmental issues (column 3, lines 44-57). It would have been obvious to one of ordinary skill in the art at the time of the invention to use K<sup>+</sup> and Na<sup>+</sup> as metal cations in an electrophotographic toner to reduce the risk of health and environmental issues associated with other metal cations.

### ***Response to Arguments***

4. In view of the amendments to the claims, filed 12/12/2008, the double patenting rejection has been withdrawn.

5. Applicant's arguments, see pages 9-13, filed 12/12/2008, with respect to the rejection(s) of claim(s) 1, 5, 9-12, 15, 16, 18, and 22-24 under Ziolo and Michel have

been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made as discussed above.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Burney whose telephone number is (571)272-9802. The examiner can normally be reached on Mon-Thurs: 7:30-6:00 PM, EST.

Art Unit: 1795

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark F. Huff/  
Supervisory Patent Examiner, Art Unit 1795

RLB